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ABSTRACT

This paper focuses on the role of collaboration in facilitating critical reflection and interpretation of data in a collaborative research project undertaken by school-based and university-based researchers. The popular image of research in the natural and social sciences has long been dominated by the figure of the lone researcher, but this image is contrary to the very social nature of the research process and renders invisible the researcher's connections to the participants and others who make valuable contributions. As researchers begin to deconstruct their own research practices, they begin to see how the social and collaborative interactions shape their outcomes. This paper provides an overview of the nature of the collaborative research project, discusses the reality of collaborative research, and explores the role of collaboration in critical reflection, interpretation, and the co-construction of professional knowledge. The research project that provides the context for the discussion was a qualitative and collaborative study of four early-years teacher-researchers who work with children from diverse family contexts. The ongoing research project is exploring teachers' talk about and critical reflections on their own investigations of the home literacies and "funds of knowledge" of a small group of students. The study also brought the power of collaboration in the generation of new professional knowledge into the foreground. (Contains 52 references.) (SLD)

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Collaborative critical reflection and interpretation in qualitative research.

98 Abstracts

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Abstract

This paper will focus on the role of collaboration in facilitating critical reflection and interpretation of data in a collaborative research project undertaken by school-based and university - based researchers.

The popular image of research in natural and social sciences has long been dominated by the figure of the lone researcher. This image is contrary to the very social nature of the research process and renders invisible, the researcher's connections to the participants and others who make valuable contributions. A shift is now being recognised however, not only in the research culture but in the value being given to collaborative research. As researchers begin to deconstruct their own research practices, they are beginning to see how the social, collaborative interactions shape their outcomes. (Vassler & Bressler, 1996) Increasing acknowledgment is being given to the collective nature of knowing and the social theories of development advocated by Rogoff & Lave, (1984) and Vygotsky (1986).

The power of collaboration in interpretation and the co-construction of professional knowledge however, has not been focused upon to the same degree. This concept must surely provide one of the best reasons for collaborative research in education.

This paper aims to:

- *briefly overview the nature of the collaborative research project*
- *discuss the reality of collaborative research - the challenges and rewards*
- *explore the role of collaboration in critical reflection, interpretation and the co-construction of professional knowledge.*

(This represents work in progress)

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The Nature of the Collaborative Research Project

Conspicuous by their absence from the literature of research on teaching are the voices of teachers themselves - the questions and problems teachers pose, the frameworks they use to interpret and improve their practice and the ways teachers themselves define and understand their work lives (Lytle &

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Cochran-Smith, 1990 : 83).

The research project was qualitative and collaborative, implemented by university and teacher researchers. It facilitated the learning journey of four early years teacher-researchers who work with children from diverse family contexts. In particular, it explored teachers' talk about and critical reflections on their own investigations of the home literacies and "funds of knowledge"(Moll, 1992) of a small group of children. As such, it facilitated the painting of an interpretive picture of the meanings that the teachers gave to their work with young children from socioculturally diverse contexts. In addition, it foregrounded the power of collaboration in the generation of new professional knowledge about the complexities of teachers' work.

The study considered the question 'How do teachers talk about and reflect on

•the funds of knowledge of their young students,

•what they believed they already knew, felt and understood and what they needed to explore further about the home culture and literacy practices of some young children and their families from diverse contexts,

•their illuminations, understandings and feelings about culture, difference and poverty

• the implications of their finding for their literacy curriculum and pedagogy as they tried to facilitate continuity between home and school?'

The key characteristics of the research were

- collaboration between school based and university based researchers
- teacher research and teacher talk
- teachers' critical reflection
- co-construction of professional knowledge
- the generation of grounded theory.

The project involved the teacher-researchers in inquiry at school and during home visits. As part of their investigations, they used systematic observations, interviews and a variety of information seeking strategies which they deemed useful at the time.They each kept a reflective journal. From this data they generated at least one case study on a focus child. Teacher researchers and the university researcher participated in discussion in a collaborative forum over a period of eleven months from 1996-1997. The collaborative forums were tape recorded, transcribed, then reflected upon. Plans for future forums were driven by the teacher researchers' needs.

As the university-based researcher, I visited the teacher-researchers in their classrooms to observe them in their working environment, to talk with them individually and to share their reflective journals. I also kept a reflective journal. Common concerns and needs were identified. We sought out new information, resources and obtained funding for the teachers to have time away from their teaching duties. This enabled them to carry out and reflect on their research as well as participate in collaborative discussions.

The aim was to explore in depth the home cultures and discursive literacy practices of families with whom the teachers were working. The teacher researchers opted for case study methodology. They wanted to use this approach to focus rather than generalise their investigations. They felt that they could better present the richness of data, the complex details and the colourful description which arose from the research process and also from the ongoing dialogue in which we were all engaged.

The research was more typical of a search rather than RE-search. We were not reconsidering the ways of investigating home cultures and literacies; we were searching for ways to do it. We were driven by the need to be more successful teachers of the young children from socioculturally diverse contexts. So in that sense, our search was a real "odyssey" (Macrorie, K. in Goswami & Stillman, 1987 : 49).

Our hypothesis was that if the teacher researchers could build a bridge between the home culture and the school culture then they could offer literacy experiences that were more useful to the children and with which they could experience greater success. As a team, we were cognisant of the work of Kathryn Au (1993) who indicated in her research on schooling and diversity, that schools are less successful in raising the achievement levels of students who are of non-European backgrounds or whose families live in poverty or who speak a language other than English. We were also influenced by Lankshear who argued that

> *It is important to realise the extent to which schools function to generate and legitimate failure* (1991 : 216)

and by Gee who commented that,

> *Some of the values of mainstream culture are complicit with the oppression of some students' home culture* (1990 : 90).

We knew that if the teacher researchers were to be more successful with the young children in their classrooms from diverse cultures then we needed to understand their living and learning context.

How to find out about the home culture, how to understand it, how to be aware of our own predilections and how to effectively respond to new information were some of the many challenges. For as Taylor & Dorsey Gaines stated:

> *Our task as social scientists is to try to understand the complexity of the literacy behaviours of young children and our task as educators is to use these understandings to support and enhance children's learning opportunities* (1988 : 3).

This research is important. We are now working in a context where as a result of immigration and cultural globalisation, Australian society is becoming increasingly diverse. Our schools cannot be comfortable with the dominant Anglo, middle class values any more. As Lingard and Rizvi commented:

> *While the teaching profession is not representative of the ethnic and cultural diversity that exists in Australia, teachers are being asked to re-think their values in line with that unprecedented level of questioning that is now evident about Australia's identity* (1995 : 6).

As researchers, we questioned and rethought our values and practices. It was our aim to deepen our understanding of the home literacies of a diverse group of children and their families. We wanted to devise curriculum and pedagogic practices that were not narrowly framed but acknowledged the potential richness of the funds of knowledge which the children brought to school with them. We were into bridge building between home culture and school culture, for as Moll wrote when discussing how existing classroom practices underestimate and constrain what children are able to display intellectually,

> *... the strategic application of cultural resources in instruction is one important way of organising change in these children's academic performance and of demonstrating convincingly how their ample language, cultural and intellectual resources could form the bases of their schooling* (Moll, 1992 : 211).

Our style of research was collaborative teacher research. We were committed to composing a true research dialogue among ourselves, that is between teacher researchers and a university based researcher. This was in stark contrast to the historical trend of educational research where the ethics of an unequal power structure between university based and school based researchers were never questioned and where university researchers were regarded as the 'thinkers' and teachers as the 'technicians.' As Meyer Reimer and Bruce wrote:

> *There was a time when researchers might have made the case for limiting a classroom study to the perspective of the objective observer, that mythical creature who steps briefly into the flux of classroom life, extracts data, places it into pre-existing categories and derives answers to externally constructed questions .... The conclusions would be reported without regard to the knowledge, concerns or feelings of the subjects of the study - the teachers and students* (Meyer Reimer & Bruce, 1993 : 2).

It makes sense for research to draw on all available resources, especially the perspective of those who experience classroom life directly and who will be affected by the research and its results. In our case, notice was also taken of the ethical and epistemological implications of the way in which the research was carried out. As collaborative researchers , we aimed to work democratically and agreed in advance that which would be made public out of the data, by whom and from what perspective.

To this end the "teachers' voices" (Cochran-Smith & Lytle 1993) have been strong throughout the project. We have tried to bring together teacher research and research on teaching; I have researched the teachers researching and their story telling has made a profound contribution to our professional knowledge about teacher research and teachers' work.

Conceptualising Collaborative Research

The educational research culture is changing as is evident in discussions at conferences and in journals. We are hearing and reading debate about the definitions of research and researchers, research in teaching and research about teaching and we can note a disequilibrium. The research domain is growing and being redefined; what were once distinct and separate cultures, ie teaching on the one hand and research on the other, are now being differently positioned.

We are poised for a shift in these two cultures, a shift that may bring two strong traditions closer together or that may see them slide further apart (Allen & Schockley, 1996 : 220).

'Sliding apart' is not an option in my opinion. Developing a synergy of the two cultures is preferable. That will facilitate a focus on knowledge for teaching, the construction of teachers as knowers rather than teachers as objects of study and the recognition of teachers as theorisers and critical practitioners. The two research cultures, school and university, should move closer together, bringing with them their discourses. At present, each writes and speaks for particular audiences and purposes. Often each passes by the other.

The challenge is to create the synergy, to develop the true collaborative spirit and practice. This does not mean that each community should compromise its own culture or lose it to the other. Rather, each should teach and learn from the other. On the one hand, teacher researchers can take the opportunity to learn from the accumulated research experience of the university researchers while on the other hand, university researchers can learn about research amidst the complexity of classroom reality. Together, they can generate new ways of looking at things which will inevitably lead to relevant, grounded research that has the potential to make a difference to professional knowledge and practice, so avoiding the situation identified by Lather (1986 b : 73),

Mainstream researchers live patronisingly in a delusion of relevance.

Collaborative partnerships: challenges and rewards

Equality among all. A sound collaboration is a give and take situation. You work together as a team (Bickel & Hattrup, 1995 : 36).

Relationships that exist between university-based and school-based researchers vary. In some situations, the teacher is an 'object' of study by the university-based researcher while in others, the teacher is an active participant as a teacher-researcher. With the latter, the teacher is a data collector and analyst. It is rare, however, to have the teacher researcher involved in the conceptualisation of a research project, posing the research questions, identifying the research methodology, engaging in collaborative analysis and interpretation and giving voice to the findings (Feldman, 1993). It can happen, as with this project and the research partnership is called collaborative research; it is being valued more now in a slowly changing research culture which acknowledges the value of diverse contributions, shared interpretation and the importance of the inside/outside approach to educational research (Cochran-Smith & Lytle, 1993).

Collaboration is more than a group of researchers gathering together or working on the same project. It is a process which demands a spirit of true cooperation, a genuine partnership and an equal sharing of power, leadership, ownership and responsibility. Collaborative enterprises are complex, take many forms and vary greatly even in terms of what people call the activity ; they are referred to as coalitions, collaboratives, consortiums, co-operatives, networks and partnerships (Goodlad, 1993). They can be substantial relationships based on arrangements between equal partners working together or they can be mostly symbolic. Schlechty and Whitford (1988 in Goodlad, 1984 : 55) described true collaboration as

an organic partnership involving partners who fulfil unique functions, sometimes in a semi-autonomous fashion but the purpose of these functions is to serve the body as a whole - neither partner has a monopoly over the activity.

Talking and writing about collaboration is easier than making it happen. In particular, collaboration between school - based and university - based researchers as was the case in this study, is not without its challenges. The difficulties have been recorded in the literature. To begin with, reconciling the inherent hierarchies of university and school-based roles with parity required for true collaboration has been cited as a difficulty by Johnston and Kerper (1996). The literature includes abundant references asserting that trust, parity and shared decision making are required for collaboration. These are often difficult to achieve within one institution but to achieve them across institutions, particularly where there is a history of unequal power between them, is problematic. University faculty have typically been in a position of power relative to schools because they have traditionally recommended changes in practice based on their research, trained teachers to implement new programs and evaluated their success. Nevertheless, if research between teacher researchers and university-based researchers is to occur, notice should be taken of comments such as those of Tikunoff, Ward and Griffin (1979 : 22) who commented that

Collaboration is viewed as teachers, researchers and trainer developers working with parity and assuming equal responsibility to identify, inquire into and resolve the problems/concerns of classroom teachers. Such collaboration recognises and utilises the unique insights and skills provided by each participant while, at the same time, demanding that no set of capabilities is assigned a superior status.

Parity is often placed at the heart of collaborative work along with the notion of mutuality and caring relationships. However, the contradictions between the collaborative paradigm and the 'real' world are powerful enough to seriously impair the efforts of even the most well-intentioned collaborations (Oakes, Hare and Sirotnik, 1986). As Noffke (1990 : 7) noted, *This is not a tidy technique. ... It is an ongoing struggle in a real material world.* Despite the difficulty, there was a commitment to true collaboration in this current study. From the perspective of the participants, parity was not about being the same in terms of power, status or influence. Rather, it was about valuing the differences and divergences that the contributors brought to the dialogue and trusting in the commitment of the individuals to the shared goals. Collaboration was not about giving up power but about finding ways to create it to help each other to feel powerful in ways that led to deeper individual and shared understandings.

Miller and Martens (1990) also discussed issues of hierarchy and imposition as constraints as well as potential in collaborative research. While they acknowledged that these notions were embedded within dominant versions of teacher-as-researcher and of university-classroom teacher collaborations in research, they were more interested in the possibilities that seemed inherent in collaborative and supportive critical inquiry. As in this current study,

they were committed to the generative possibilities of collaboration and in particular, giving 'voice' to teacher researchers as creators of professional knowledge. Despite their commitment, they were constantly challenged by the possibilities of imposition within the forms and intentions of their collaborative research. They remained vigilant about the ethics of the complex relationships between university-based and school-based researchers, trying to acknowledge the pluralities and diversities of the participants' educational communities. Collaborative research was challenging but offered opportunity for *rejoicing in our continuing willingness to explore together our limitations and our possibilities* (p. 57).

Wasser and Bressler (1996) explored ethical issues as they relate to multiple selves and multiple others. They noted that collaboration assumes participants will negotiate their presence within the team. Each must gain an understanding of group norms. Each must teach others how one will participate, what one's role is and what others can expect from this role. The challenge is to balance these positions within the team so that the individual-self trusts and is confident just as the collective-self is. In addition, the support and consideration of the group for each other's concerns and the collective support for the responsibilities related to the research in progress are critical to problem solving and giving due attention to important ethical issues.

Effective collaboration requires shared leadership as opposed to the hierarchical organisation alluded to already. This means shared leadership from the beginning of the project when fair input into the initial research agenda must occur. Unless this happens, the size and pace of tasks cannot be agreed upon and individuals are constantly negotiating their own responsibilities, often feeling that one section of the research community has greater control over the collaboration. This can result in an implicit power struggle which is totally counter-productive to team research. Rather, the partnership process must model collaboration in substantive, tangible ways every step of the way and this must include shared leadership. This is not easy. Goodlad (1993) went so far as to say that the more the leadership is spread around, the better off the partnership will be because with power comes responsibility and responsible leadership entails creating the opportunities for responsible leadership in others. In terms of university and school partnership, this is a particular challenge because it means breaking out of traditional roles and relationships. It is necessary for all the actors to unpack the roles that they play. It is critically important that the university researchers are not seen as the knowledge generators and the teachers as the translators. Instead, the teacher researchers must have time to critically reflect and interpret the research which is underway and to discuss and value their own experiences and knowledge. There should be an ongoing process of inquiry and critical interpretation within and across both communities which is essential for constructing and reconstructing professional knowledge.

However, Feldman (1993) maintained that collaborative research between university-based and school-based researchers may not be possible because each research community has different unreconcilable goals. On the one hand, the university researchers aim to produce knowledge and not to deal with the immediacy of practice. While they hope that the knowledge which is generated will be of help to teachers, they are more interested in building scientific knowledge for and about teaching. Teachers on the other hand, want to improve practice. The type of knowledge that they generate therefore is highly contextualised and dependent on time and place.

In similar vein, Allen & Schockley (1996) identify different priorities in research as being problematic for collaborative research between the two different education communities. They argue that university researchers have been enculturated to see research as a straight line; there will be an idea then a proposal, funding, site selection, research, conference presentations and finally publications. Teacher researchers on the other hand must be led by the lives of research - the children. Their questions and methods grow out of their specific context which is their research site. As the student group is unique, the research questions keep changing as do the data collection opportunities. The analysis and reflection will possibly change teaching behaviour which then alters the whole study.

Indeed, the very different education and research cultures of the two sites - university and school - pose particular challenges for even maintaining the interest and involvement of teachers and researchers in collaboration over time. This is despite the acknowledgment that the cause for collaboration is a most worthy one. Often, the research represents 'just another thing' that the teachers are involved in; their commitment to it wavers as the demands and needs of students and school routines impinge on their attention and energies. They feel a tension between their teaching and their research, particularly if one is not seen as part of the other. The different rewards and incentive systems that operate in the university and school settings are another source of cultural clash apparent in collaborative research. As Sirotnik in Goodlad (1993 : 31) stated,

School systems and universities are not cut from the same cultural cloth. The norms, roles and expectations of educators in each of these educational realms could not be more different. eg. In the regiment of time and space in the schools versus the relative freedom of these precious commodities in the university setting; an ethic of inquiry in the university versus an ethic of action and meeting immediate needs in the school; a merit system with promotion and tenure in the university versus an egalitarian work ethic in the schools.

The problem of time presents problems for collaborative researchers (Allen & Schockley, 1996) and certainly represented an ongoing dilemma in this current study. Time is a critical resource in the development of sound collaboration. Leadership tends to underestimate exactly how much time is needed - time for the team spirit, trust, confidence and cooperative dynamics to develop; time to establish dialogue that integrates the research and practitioner knowledge bases; time for meaning-making by each participant; time for debriefing, sharing and the generation of new knowledge; time to negotiate the research processes, responsibilities and ethical considerations associated with shared knowledge/product generation and ownership. If due regard is not given to careful and sensitive time management which takes notice of time lines yet responds to the inevitable need for flexibility, then frustration and tension will occur.

With collaboration or any form of partnership, there will sometimes be an element of tension and conflict. This can be equally true for partnerships within and across institutions like schools and universities where the cultures and working climates are so different. It does not mean necessarily that the partnership is self destructing. Rather, it should be viewed as generative tension where divergent perspectives can lead to an enriched view for all.

The cycle of risk taking and learning that occurs within the support of collaboration and dialogue is addictive. When it works well, the tensions and painful aspects of development are supported by relationships and conversations within the group. The harder the problem, the more we look forward to talking about it. The ambiguities become sites for learning; the emotional ups and downs push us to continue to be reflective (Christensen et al. 1996 : 194).

However, to make collaborations work, group members need to be sensitive to the differences in institutional interests and want to constructively solve problems when conflict occurs. Sometimes teachers feel a tension between their roles as researcher and teacher. They struggle to make their research an organic part of their teaching day, examining what they already do, collecting and interpreting data from their work site. University researchers also feel these tensions along with the pressures of time with different and often conflicting demands making choices difficult. To minimise these tensions, both research communities need to work out how teaching and research complement each other, working toward a synergy rather than dividing energies.

Multiple roles and overlapping histories with different team members can mean *the addition of complex wrinkles to issues of ownership, boundaries and territoriality* (Wasser & Bressler, 1996 : 11). These may never have been experienced by researchers who have previously worked as individuals. This is another set of challenges to collaborative research and also causes one to focus on the way in which the final interpretation is fixed. Whose voice will be heard in the final analysis or how will the multiple voices be heard? Who will author the final presentation of the research or how could there be multiple representations? In this current study, these issues were considered and negotiated in the very early stages of the research process.

Different cultures, roles and histories within the two research communities are no more obvious than in the area of methodology and research design. School-based and university-based researchers differ and yet they can learn much from each other. Teacher data collection strategies can integrate teaching and research; they can identify the links between thought and action. The use of teaching journals is a legitimate and lasting record of experience. Student conferences and logs are substantive accounts of individual and collective change over time. Similarly, dated work samples and anecdotal comments are forms of record keeping which become an organic form of classroom practice. These strategies are different from those used by university-based researchers but should be supported as offering a different, valuable and rich perspective from the typical observations, questionnaires, time sampling, interviews etc. used by university - based researchers. Even in the coding, care must be taken not to lose the thick qualitative descriptions gained by the teacher researchers in the context of their work. With school-based collaborative research, an evolving, responsive methodology is ideal.

In a way, research is like fishing: what you uncover depends on where you cast your line (JD Klemme in Freeman, 1997).

This notion is not well accepted by many university-based researchers and yet such flexibility in methodology facilitates the exploration of unforseen possibilities for gathering that extra piece of valuable and illuminating data. From this could come the elusive grounded theory!

Do all of these difficulties, dilemmas and challenges mean that true collaboration between university and school-based researchers is not possible or is not worth the effort and time? The literature cites so many barriers. It seems however, that they focus predominantly on the collaborative process, something which can surely be managed in a multitude of constructive ways, particularly when one is aware of the difficulties and dilemmas. I am otherwise persuaded by the potential power of collaboration and its place in qualitative research, particularly as it relates to interpretation and knowledge generation. While this has already been discussed, other advantages of collaborative research can also be explored in the literature.

Tikunoff and Ward (1983) have identified three outcomes of what they call collaborative research where teachers are in the research as participants. The first is that the research will be used by teachers. The second is that there is greater likelihood that the research will better represent the complexities of the educational situations and finally that the time between the initiation of the project and the use of the findings will be reduced. Similarly, Lieberman (1986) argued that collaborative research encourages reflection and the taking of action by teachers to deal with the 'messiness of teaching and schooling problems.' It encourages collegiality among teachers; it narrows the gap between doing research and implementing research findings; it matches the timelines of schooling better than large scale funded projects; it provides opportunities for teachers to assume leadership roles and so empowers them; it legitimates teachers' professional knowledge. Furthermore, collaborative research contributes to the 'professionalisation' of the teacher researchers and the drive toward teacher leadership. Fullan (1993) sees teacher

leadership as critical to the change process and research as pivotal to the establishment of an intellectual basis for the teacher to be at the knowledge-building table in the profession. While all of these outcomes are of benefit to the teacher researchers, university collaborators gain from the relationship because their research findings are based on an additional perspective - that of the practitioner - and because their data can contain the rich descriptions and contextual factors that only insiders can supply (Feldman, 1993).

Multiple perspectives, voices and lenses are described in the literature as advantages of collaboration (Wasser & Bressler, 1996). The heterogeneity of a collaborating qualitative research team results in the bringing together of different discourses ; these are borne out of a variety of experiences, passions, knowledge and views of the world. So, throughout the ongoing processes of reflection and interpretation, different issues are constantly raised from different perspectives, diverse interests are represented and through the resultant creative tensions come new ideas, understandings and professional knowledge. Such processes exemplify Vygotsky's constructivism (1962) and the transactional or intertextual nature of knowing as a social act, discussed by Bakhtin (1981). The dynamic and constructive processes also reflect Dewey's notion of the 'problematic' (1933). Uncertainty as found in problematic situations created by intellectual tensions, is, according to Dewey, essential to inquiry. It leads to the exploration of options, differences, assumptions and then demands some form of creative resolution. However, resolution is rarely a neat linear activity. Rather, collaborative reflection and interpretation will almost ensure recursivity and uncertainty as researchers exchange perspectives. This is what leads to the depth and richness of interpretation, understanding and new knowledge. Intersection of perspectives is one of the great benefits of collaborative research.

... historic cradles of civilisations were intersections full of encounters between interesting strangers who challenged each other to learn new languages and new world views. Today, in a highly permeable world, we all live in the intersections (Jones & Nimmo, 1995 : 12).

Dewey (1933) is acknowledged as the initiator of the concept of reflectivity. He defined it as

active, persistent and careful consideration of any belief or supposed form of knowledge in light of the grounds that support it and the further consequences to which it leads. (Dewey in Calderhead 1989 : 43).

Reflection, he maintained, involves an integration of attitudes and skills in the methods of inquiry - neither will suffice alone - and he identified three attitudes imperative for reflective practice. The first is openmindedness which is described as

an active desire to listen to more sides than one, to give heed to the facts from whatever source they come, to give full attention to alternative possibilities and to recognise the possibility of error even in the beliefs that are dearest to us (Dewey in Zeichner 1981-82 : 6).

The second attitude is responsibility by which Dewey meant careful consideration of the consequences to which an action leads and the third attitude is wholeheartedness which gives individuals the strength to move beyond abstract notions and put their ideals into practice (Goodman 1991). Reflection enables teachers to direct their actions with foresight and to plan according to ends in view or purpose of which they are aware. It enables them

to know what they are about when they act (Dewey in Zeichner, 1981-82).

Calderhead (1989 : 44) commenting on the work of Habermas (1974) stated that,

reflection is viewed as a process of becoming aware of one's context, of the influence of societal and ideological constraint on previously taken- for-granted practices and gaining control over the direction of these influences.

The role of collaboration in supporting the teacher as reflective practitioner and in facilitating the change process has been discussed by Fullan (1993) and Tharp and Gallimore (1988). The latter researchers maintain that no change to understandings or pedagogy has a realistic chance of succeeding unless teachers are collaboratively involved in the process and are able to discuss, define and address the problems as they see them. They have identified the creation of collaborative settings for joint productive activity as the single most important factor in producing critical reflection and change in education. By 'joint collaborative settings' they mean a forum that facilitates long-term collaborative work between researchers and teachers and among teachers themselves, in the service of helping teachers teach. Similarly, Moll et al. (1992) found that such collaborative settings, when used in their project, became a key vehicle for reflection on and analysing instructional practices and planning change in the light of new understanding about the funds of knowledge of children from socioculturally diverse contexts.

Fullan (1993) explained that there is a ceiling effect on how much we can learn from our personal reflections if we keep to ourselves. He believes that the ability to collaborate is becoming one of the core requisites of post modern society. Personal mastery and group mastery feed on each other in learning organisations he says. Without collaborative skills and relationships, it is not possible to learn and to continue to learn as much as one needs in order to be an agent for improvement. Fullan and Hargreaves (1991), however, warned against losing sight of quality individualism when moving towards collaborative reflection. While isolation is a problem because it constrains personal inquiry learning and solutions to the resources of the individual, the capacity to think and work independently is essential. The key therefore is for individualism and collectivism to have equal power in the process of change and professional development.

The work done by Nias, Southworth and Campbell (1992) indicated that colleagues seeing each other learn is encouraging. Individuals realise that they are not alone in their need to learn. Rather, learning is seen as a means of increasing one's ability, not as a sign of weakness. The experience of working together enables and encourages teachers to challenge one another's thinking and practice while a climate of support combined with a commitment to learning generates a **more** rather than less questioning approach to improvement and **more** rather than less risk taking. Nias et al (1992) found that in the process of working collaboratively, many teachers change their beliefs and practices over time.

Collaboration and the social construction of knowledge

There has been a shift in thinking in education and other related fields toward greater recognition of the collective nature of knowing. Greater attention is being paid to social and cultural influences on learning and the construction of knowledge (Rogoff & Lave, 1984, Vygotsky, 1978). Historical perspectives have favoured the maturational and developmental theories of intellectual functioning. More recent perspectives acknowledge the social origins of thought and language and the dialectical nature of learning within a dynamic context. Vygotsky (1978) for example, described development as a complex dialectical process, characterised by periodicity, unevenness of function and qualitative transformation through the intertwining of external and internal factors.

He focused on the historically shaped and culturally transmitted psychology of humans, arguing that humans are active, vigorous participants in their own learning. He identified speech or language as one of the key tools in the learning process. He depicted a dynamic that he believed is present throughout the entire span of human life (Vygotsky, 1986 : 128).

Every function in the child's cultural development appears twice, on two levels. First on the social and later on the psychological level ; first between people as an interpsychological category and then inside the child as an intrapsychological category. This applies equally to voluntary attention, to logical memory and to the formation of concepts. The actual relations between human individuals underlie all the higher functions.

Vygotsky draws attention to the notion of learning as a social activity ; that humans engage in social interaction and they take understandings and ideas to and from that context. Irrespective of the fact that this great Russian psychologist focused much of his attention on the study of children, it would be a mistake to view his work as pertaining only to child development. He emphasised the study of child development because he believed it to be the primary theoretical and methodological means necessary to unravel complex human processes (Vygotsky, 1978). His work can also be valuable in the understanding of adult learning in a social interaction setting. Thus, in relation to this project, Vygotsky's perspective can give credence to the social construction of professional knowledge by the teacher researchers and to the power of language in their negotiations of interpretation and understanding in the collaborative forum.

Social interaction, engagement in conversation, debate, creative tension, questions and divergent perspectives among individuals, all provoke the development of opinions, understanding and new positions. There is little doubt that people learn from each other as there is also little doubt that interaction between individuals can lead each to new positions in their thinking. However, the interaction will be influenced by the social, cultural, political and philosophical agendas that are brought by the individuals. So,

we engage in dialogue ... while we listen, we continually make judgements on what we see or hear ; we make sense through a process of selection and rejection. What we select and reject very much depends on who we are, who is speaking to us, what they say, how they say it, where and when we are listening (Casey, 1993 : 7).

Differences in thinking will involve divergences. Their intersection in the course of social interaction can lead to mutual meaning and understanding - the social construction of knowledge. Bakhtin (1981) argued that dialogue and the resultant texts that are created can only be understood within their specific and varied social contexts. He believed that the immediate social situation and the broader social milieu determines the structure of a dialogue. This means therefore, that when a group of people or teacher researchers, as was the case in this study, meet in a collaborative forum, they engage in dialogue which at first appears to be comprised of individual and idiosyncratic expressions but which really results in a social dialect. Such is the nature of social context and social interaction - that it empowers and liberates individuals to contribute narrative and to co-construct meaning as a result of the dialogic exchange (Bakhtin, 1981).

Genuine collaboration in a qualitative research team should reflect this process so that the result is a shared interpretation of data, deeper understandings and a new body of knowledge. It is not expected that each participant loses their sense of individuality but that they recognise the value placed upon their individual perspectives and contributions. Without these divergent contributions, the scaffolding of each researcher/learner

toward new knowledge and the trading of ideas does not occur (Vygotsky, 1962; Bakhtin, 1981).

We all need to be collaborators in the construction of ever-changing knowledge - of an 'emergent curriculum' for our lives together in a changing world (Jones & Nimmo, 1995 : 4).

Collaboration, interpretation and the co construction of professional knowledge

The popular image of conventional research in natural and social sciences has long been dominated by the figure of the lone researcher. This image is contrary to the very social nature of the research and learning processes. It renders invisible, the researcher's connections to the participants and others who make valuable contributions.

A shift is now being recognised however, not only in the research culture but in the value being given to collaborative research. As researchers begin to deconstruct their own research practices, they are beginning to see how the social, collaborative interactions shape their outcomes (Wassler & Bressler, 1996). Increasing acknowledgment is being given to the collective nature of knowing and the social theories of development advocated by Rogoff & Lave (1984) and Vygotsky (1986).

Collaborative research processes, issues relating to collaborative research and their inherent partnerships have been explored widely in the literature. The power of collaboration in interpretation and the co-construction of professional knowledge however, have not been focused upon to the same degree. These concepts must surely provide one of the best reasons for collaborative research in education.

The notion of the power of collaborative interpretation of research data lies within the philosophical and theoretical aspects of the social nature of learning, the forms of group work in educational activity and the way in which collaboration affects outcomes. The first of these, the social nature of learning and the social construction of knowledge, provides insight into the ways that learning unfolds as a social act. It comments on how knowledge is held by individuals and multiple group members and how the social processes of interpretation form the frameworks for epistemologies (Lave & Wenger, 1991; Rogoff & Lave, 1984; Vygotsky 1978; Wertsch, 1991). These works owe much to the recognition of the transactional or intertextual nature of knowing as a social act discussed by Bakhtin (1981) and offer a framework for the function of the collaborative forum in this study.

The philosophical and theoretical aspects pertaining to the forms of group work in educational activity include discussion of the procedure for organising group work, the methodological tools that may be used and the roles that the group members may play. Bickel & Hatrup, 1995, Carr & Kemmis 1983, and Cochran-Smith & Lytle 1993, have explored issues relating to Action Research and have noted the effectiveness of collaborative work where the work has been jointly shouldered by teacher researchers. In particular, they have commented on the value of both individual and group perspectives, the sharing of leadership and the power of multiple voices. They have noted that one of the methodological tools for action researchers is often group interpretation of their own classroom practices captured on video.

Friend & Cook 1992, have written about the dynamics of group work and have offered perspectives on the factors which unite and divide groups : the problems of conflict, territorial boundaries, lack of interpersonal skills of members, lack of time, money, communication and planning. On the other hand, Lee, 1992, has indicated the benefits of collaborative research to teaching, curriculum innovation, experimentation and the management of stress in the workplace. These works offer guidance to the dynamics and process of collaboration in team research and were noted carefully when negotiation of the collaborative research process occurred for this research project.

Finally, in relation to the way that collaboration affects outcomes, Gudeman & Rivera 1990, have offered insight into the way in which groups make meaning and construct interpretations. They liken their vision of collaboration to conversation where there is sustained dialogue, there are valuable multiple perspectives from participants and value is given both to the process and the product.

So, given that 'the group' is a critical methodological tool in qualitative research and considering that

the interpretive zone is the crucible where researchers sift, sort and consider meaning of the field work, and indeed, ... the group is a tool for reflection (Wasser & Bressler, 1996 : 7).

then we should give 'the group' considerable attention. Wasser and Bressler (1996) propose the notion of the 'interpretive zone as the intellectual realm' in which researchers work when they engage in collaborative work with each other. In the interpretive zone, researchers bring together their different kinds of knowledge, experience and beliefs to forge new meanings through the process of the joint inquiry in which they are engaged. They use the *interpretive zone* to refer to collective interpretive processes. The word *zone* owes its origin to Vygotsky (1962) who spoke of the *zone of proximal development,* to Bakhtin (1981) who wrote about the *character zone* and Pratt (1987) who spoke about the *contact zone.* All refer to unsettled locations, areas of overlap, joint custody or contestation. These sentiments are summarised by Wasser and Bressler 1996 : 13 who wrote

It is in a zone that unexpected forces meet, new challenges arise and solutions have to be devised with the materials at hand.

This concept is well situated in the constructivist philosophy. It is in keeping with the notion that knowledge is a social construction and is entirely relevant to the philosophical underpinning of this current study. It has a Bakhtinian flavour (1981) - the interpretive zone is socially and historically constructed where multiple voices converge and diverge, where different perspectives are traded where people negotiate with a view to constructing and interpreting meaning in a dialectical relationship. Such dialogue deepens the interpretive possibilities.

Collaborative interpretation by a qualitative research team, can assist in the co-construction of professional knowledge. It demands reflection on and the uncovering of the meaning and significance of behaviour. As such, the interpretive accounts and dialogue between participants can offer opportunities to delve more deeply beneath the surface of the professional work of teaching. Not only can extended understanding be facilitated but the range and sophistication of the language for describing this understanding and behaviour can also be extended. There results a transformation of consciousness, an ability to make more explicit the values, assumptions and knowledge which have been hitherto, unexpressed or even unrecognised.

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Collaborative critical reflection and interpretation in qualitative research.

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